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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,812	09/25/2006	Thomas Werner	12123-0005	3957

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CLARK & BRODY
1090 VERMONT AVENUE, NW
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WASHINGTON, DC 20005

EXAMINER

WEST, PAUL M

ART UNIT	PAPER NUMBER
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2856

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,812	Applicant(s) WERNER, THOMAS	
	Examiner Paul M. West	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 9, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01032006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner (2003/0056572).
3. Regarding claims 1 and 2, Werner teaches a method for detecting leaks in a heat exchanger having discrete flow paths 12 and 13, the method comprising introduction of helium detection fluid into flow path 12, allowing air to flow through the other flow path 13, and detecting detection fluid which has leaked from the flow path 12 to flow path 13 (Par. 0012, Figure). Werner does not teach passing the helium detection fluid in different directions. However it would have been obvious to one of ordinary skill in the art to pass the detection fluid in different directions because it would provide a greater chance of detecting very small leaks.
4. Regarding claims 3 and 10, Werner does not specify which flow path is the heat exchanger fluid flow path and which one is the working fluid flow path. It would have been obvious to pass the detection fluid through either flow path or both flow paths at different times because whether a leak exists from one to the other will be determined either way and the choice is arbitrary.

5. Regarding claims 4, 11 and 12, Werner teaches passing the helium detection fluid through flow path 12 at a higher pressure than the air in flow path 13 (Par. 0012).

6. Regarding claim 5, Werner does not teach a specific concentration of helium, however it would have been obvious to one of ordinary skill in the art to use any number of helium and air mixtures which have enough helium to be able to be detected by a detector, because any number of mixtures produce the same results.

7. Claims 6-8 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner in view of Shanley (5,574,213).

8. Regarding claims 6-8 and 13-15, Werner teaches all of the limitations as set forth above but does not teach introducing a fluorescent dye into the detection fluid. Shanley teaches inspecting various apparatus for leaks, including heat exchangers (Col. 3, lines 46-50) using a detecting fluid comprising helium and a fluorescent dye (Col. 3, lines 31-45 and 60-66) which is passed into the apparatus being tested, and wherein leaks are detected by detecting the fluorescent dye with a fluorescent responsive detection means, such as a black light (Col. 3, lines 31-45).

Allowable Subject Matter

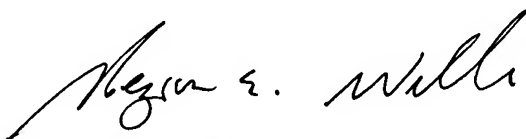
9. Claims 9, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul M. West whose telephone number is (571) 272-8590. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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